

REMARKS

Claims 49-96 have been canceled. Claims 1-48, 97 and 98 and new Claims 99-135 are active in the present application. Claims 1-48, 97 and 98 stand withdrawn from consideration. Reconsideration is respectfully requested.

The present invention relates to a transfer belt that is used in various types of electrophotographic image forming apparatus.

Invention

The present invention as claimed in Claim 99 is directed to an intermediate image transfer belt for an image forming apparatus that comprises an image carrier for forming a latent image, a developing device for developing said latent image with a developer to thereby form a corresponding toner image and said intermediate image transfer belt to which said toner image is transferred from said image carrier, and executes primary image transfer from said image carrier to said intermediate image transfer belt and then executes secondary image transfer from said intermediate image transfer belt to a recording medium. The transfer belt is prepared by feeding a first raw liquid material into a hollow, cylindrical mold, which is included in a centrifugal molding machine, with said mold being rotated, and then curing the first raw material to thereby form a first endless belt layer on an inside of the mold. A second raw liquid material is fed into the mold with said mold being rotated, and then the second raw material is cured to thereby form a second belt layer. By this process the first belt layer has elasticity while the second belt layer has greater hardness than said first belt layer. Further, the first belt layer has a surface gloss of at least 50, a hardness ranging from 30° to 70°, as measured by JIS A scale, and a

thickness of 200 to 2000 μm and the second belt layer has a thickness ranging from 30 to 1,000 μm and has a hardness greater than that of the first belt layer.

In the embodiment of the invention of Claim 118, the transfer belt is prepared by feeding a first raw liquid material into a hollow, cylindrical mold, which is within in a centrifugal molding machine, with the mold being rotated to thereby form an endless first film on an inner surface of said mold, and then feeding a second raw liquid material into the mold with the mold being rotated to thereby form a second belt layer on said first film. Subsequently, the raw liquid materials respectively are cured forming a first film and a second film. The first film forms, when cured, an elastic, first belt layer while the second forms, when cured, a second belt layer having greater hardness than the first belt layer; wherein the first belt layer has a surface gloss of at least 50, a hardness ranging from 30° to 70°, as measured by JIS A scale, and a thickness of 200 to 2000 μm and the second belt layer has a thickness ranging from 30 to 1,000 μm and has a hardness greater than that of the first belt layer.

Prior Art Rejection

The Examiner has stated with respect to the Tanaka et al patent that the structure of the at least bilayer belt as shown in Figs 1 and 2 of the reference is the same as the bilayer belt of the present invention, particularly as shown in Fig 5 of the present application. To the contrary, however, layer 101 of the present belt does not correlate directly with layer 30 of the belt 20 of the patent, and layer 102 of the present belt does not correlate directly in function with layer 31 of the patent. That is, in the belt 100 of the present invention, the layer 101, which is first formed in the rotating mold, is the “outside” layer of the belt which ultimately contacts the surface of a paper sheet to transfer an image to the paper. As stated in

the text of the application on page 18, this layer 101 has a surface gloss of at least 50, a JIS hardness ranging from 30° to 70°, and further, as now stated, a thickness of 200 to 2000 μm .

When this layer comes into contact with a paper sheet, it has sufficient deformability to conform with the greater irregularities of plain paper (in contrast to the much smoother surfaced paper normally used in electrophotographic image devices) to effect a superior transferred image to a plain paper sheet in comparison to known the image transfer surface of known image transfer belts. The second layer 102 or “inside” layer of the belt is specified as having a thickness of 30 to 1,000 μm and on page 20 of the text is described as having a greater hardness than outside layer 101. On the other hand, the “outside” layer, which comes into contact with paper sheet, of the belt shown and described by Tanaka et al, is the layer 31 of the bilayer belt shown in Fig 1. This outside layer or covering layer then correlates with the first layer 101 of the belt of the present invention. This outside layer does not have the several characteristics as stated for the first layer of the belt of the invention in the present claims. Further, the layer 101 is not the elastic layer 30 of the patent. Rather, the elastic layer 30 of the belt of the patent is the “inside” or base layer of the basic bilayer structure which is said to have a hardness of 85° C or less. Accordingly, “the claimed invention has a structure that is (not) the same as the structure of Figure 1 taught by Tanaka et al.”

It must also be noted that there is no discussion of the particular problem described in the present case which the image transfer belt of the invention overcomes. Thus, there is no motivation provided by the reference which would lead one of skill in the art to the present transfer belt as formulated. In this context it is noted that an important parameter of the material of covering layer 31 is its permittivity (ϵ) which is said to be ≤ 6 . On the other hand, for layer 101 of the present bilayer belt, permittivity is not mentioned as a factor of the belt which is significant. What is significant with respect to layer 101 is that it have the

capability of deforming and in the process conforming to a significant extent to the irregularities of the surface of plain paper. The permittivity mentioned by the patent, on the other hand, is not a property that correlates to the essential surface conforming ability of the outer layer of the present transfer belt. Accordingly, the transfer belt in its embodiments as claimed in the present invention is not suggested by Tanaka et al and withdrawal of the rejection is respectfully requested.

It is now believed that the application is in proper condition for consideration.

Respectfully submitted,

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